General Film

REWIND

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"This is what is known as exposed film. Exposure being the process of subjecting a photographic film to suitable intensity of radiant energy for a given time in such manner that it may produce a latent image on an emulsion — and the man dropping it on the floor is known as an ex-employee."

THIS MONTH'S FEATURE: FORCING NEGATIVE DEVELOPING

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A preliminary report on . . .

FORCING NEGATIVE DEVELOPING

Although "forced development" of motion picture camera negative (and reversal-positive) films is not new, interest in and talk about forced developing increased considerably during the past year — with particular reference to 35 mm color negative.

What is "forced developing"?

Whether we use that term, or "over-developing", "extended developing" or "pushing development", the meaning is the same—slowing the movement of the camera film through the developing chemicals in order to increase the actual development of the exposed image (i.e., increase the effective speed of the film).

Obviously, over-developing is required only if the camera negative is under-exposed. Such an under-exposure may be an accident, but what we're now discussing are purposeful under-exposures.

The cinematographer occasionally finds himself in a situation where the available light is not sufficient to expose the negative properly, relative to the manufacturer's speed rating of the film being used. In other words, if he exposes with the light available and the laboratory gives the exposed film normal developing, a one-light daily will look dark.

This situation comes up frequently in news and sports assignments—the cinematographer has no control over the event or the location lighting. The same production problem may confront the documentary or "real life" cameraman.

In our experience the same problem has been presented the cinematographer working on the stage. In one case involving a small stage, the power available was sufficient for black-and-white but not for color photography. In another case, with plenty of power available, the lower dollar cost of working with a lower light level interested the producer—if the laboratory could then bring the negative density up to normal as it would finally be developed in the film.

Just how far can this be carried? And, aside from the situations where the lighting can in no way be controlled, is this a desirable procedure?

An article on "Pushing Films to Increase Speed" in the revised edition of the American Cinematographer Manual by Wilton R. Holm,* A.S.C. Associate Member, includes the following two statements:

"Pushing a film during development does result in characteristic changes, as far as any particular film type is concerned . . . They (the manufacturers) will advise which films can be pushed, and how much pushing can be tolerated before an objectionable loss of quality results".

We are told by film specialists that the apparent increase in speed is the result of two factors. One is the direct effect of the extended developing. The other is "loss of the under-exposure latitude designed in the film and its rating by the manufacturer". Thus, care should be taken to expose carefully. Again, if possible, shoot advance tests.

One laboratory's experiments conducted in cooperation with one of the networks were reported as extending developing time to 100 ASA, 200 ASA, and 400 ASA.*

The first series of tests, working with the emulsion, demonstrated that it was possible to increase the effective speed of the film by extending the developing time. But, what happened to the image quality?

Following tests established that the speed of the film could be increased by 2/3 stop (which was reported as 80 ASA) with relatively small loss of quality. Under certain conditions the effective speed (Exposure Index) could be increased by two stops—but with degradation of picture quality then being obvious—to the point that this rating could be used only for night shots. Beyond two stops the quality losses out-weighed any speed advantages.

This practice of under-exposing on the set and over-developing in the laboratory has been reported as standard procedure on a limited number of Hollywood stages this season.

However, film technical representatives checking these sets found that the actual use of light involved cutting the key light but compensating for this by increasing the fill light—which leaves open the question of how much actual reduction in electrical power was involved.

The laboratory must also take into consideration that extending developing time reduces developing capacity per hour—since the film moves more slowly through the machine. Depending on the increased speed to be attained, the negative is in the machine from 20% to 40% longer than in normal developing. For this reason the laboratories have established a surcharge for extended development.

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* Bill Holm, west coast motion picture specialist for the E.I. duPont Co., is a member of the Optical Society of America, the Society of Photographic Scientists & Engineers, and a Fellow and Vice President of the Society of Motion Picture & Television Engineers.

* Although we all refer to the "ASA rating" of motion picture films, there actually is no such thing. The American Standards Association has issued ASA speed ratings for sheet film, but not for motion picture film. The latter are identified by an Exposure Index number, by the film manufacturer. The Exposure Index represents the manufacturer's recommendation for the most satisfactory exposure under controlled lighting and recommended processing conditions, and thus has a relationship to speed but is not an ASA speed rating.

What this boils down to is the essential usefulness to the newsreel and documentary cameraman of the increased speed that can be achieved by extended developing, and —assuming careful camera work—the occasional usefulness to the cinematographer on the set or on location. The latter would stay within the 80 "ASA" rating, except for night shots.

Our own experience, plus the comments of other laboratory technical people and the film manufacturers' representatives, leads to these conclusions:

1. The cinematographer should conduct careful tests before departing from the recommended Exposure Index of 35mm color negative.

2. 35mm color negative's latitude makes possible the forcing of the effective exposure by approximately 2/3 to 1 full stop.

3. Results beyond a stop are largely illusion—the quality loss is unacceptable for normal cinematography, limited therefore, to night shots.

Since a legitimate question has been raised regarding the actual dollar savings in normal production, we feel it's only prudent to use caution in considering low light level production on the set. This is a consideration separate from night photography using the available low light level.

The laboratory can handle its end of the job, possibly with some slow-down in delivery of dailies due to the extended developing time.

The burden is really on the cinematographer because it's his product on the screen.

Information in a capsule . . .

THE SINGLE CONCEPT FILM

The "single concept film"?

What is it?

The single concept film is a short, usually silent film designed to demonstrate a specific skill, problem, experiment, phenomenon, or idea. The idea of the short, study film is not new—but it gained great impetus with the development of 8mm cartridge-load projectors.

This type of film may have a projection or screen time of thirty seconds, two minutes, five minutes, or any other length—the determining factor being the time taken by the experiment, action, or whatever it is being shown.

There are two main categories, "films to use" and "films to look at". The first type is designed for viewer response, either in the form of answering questions, working problems, etc., or in the teaching of manual skills, such as woodwork, metal work, pottery making, and, in the sciences, for example, in guiding dissection and glass-working procedures. Experiments have also been made with some success in the use of continuous loops as an aid in the teaching of lip reading to deaf children, thus freeing the teacher from repeating the same lip motions over and over.

"Films to look at" are by far the widest application of the single-concept film. Usually four minutes or less in length, the films are designed to be used the same way a chart, map, or still photograph would be used—as an illustration to the teacher's commentary. Film clips from longer films are sometimes utilized, but generally the more successful single-concept films are produced with the goal of a film to make or illustrate a specific point.

The single-concept film enables the teacher to take advantage of all the capabilities of a motion picture: live action, varying speeds, color, animation, and time-lapse. With proper equipment, he can do this without interrupting the concentration of the students, darkening the room, threading the projector, etc. Also, the material is presented by the teacher at the best learning rate for the level of his class. The students can individually repeat and review the material as necessary. During the film all students see the material from the prime vantage point of the camera lens, rather than the very few who can satisfactorily see a "live" demonstration.

The decision whether to make a single-concept film for a particular subject is usually based on whether the film can present the material better than a live demonstration, a diagram, or a photograph. Some examples of the application of this criterion would be cases where the action is too slow or too fast, an experiment is dangerous or requires unavailable equipment, or a demonstration too small or too large to present in a classroom.

The further development of the single-concept film depends upon several factors. Some of the requirements for growth are the standardization of 8mm film size and format, mass availability of high-volume, low cost film, simple-to-operate projectors and projection equipment, and easy access to brief films that are closely correlated with classroom curriculum or business, industrial training, and Sales needs.

However, thousands of single-concept films are now available, from a variety of sources—and all indications are that this is just a small beginning.

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CARTRIDGED FILM CONFERENCE

A National Invitational Conference on Cartridged Films was held at Michigan State University, East Lansing, Michigan, on February 22–24 — sponsored by the M.S.U. Single Concept Film Clip Project in cooperation with the U. S. Office of Education.

G. Carleton Hunt, president of DeLuxe Laboratories, Inc., was one of the speakers but he spoke on the necessity of achieving 8mm standards in his official capacity as president of the Society of Motion Picture & Television Engineers. Also attending from DeLuxe were Neal Keehn, Vice President, Sales (Hollywood), and John G. Rogers, Vice President, Crescent Film Laboratories (Chicago).

The agenda included a report on the findings of the Single Concept Film Clip Project, reports on experience in the use of single concept films, discussions of the problems and opportunities inherent in 8mm, and group discussions concerning special interests.

Elwood E. Miller, Director of the Single Concept Film Project served as Chairman of the Conference.

HOLLYWOOD FESTIVAL OF WORLD TELEVISION

The Fourth Annual Hollywood Festival of World Television will be held April 9 through 12 at the La Costa Spa and Country Club in Carlsbad, California, south of Los Angeles. One of the speakers scheduled to address those attending the four days of sessions is DeLuxe president G. Carleton Hunt who will speak in his capacity as President of the Society of Motion Picture and Television Engineers.

A–V DATE BOOK

Mar. 7	International Broadcasting Awards sponsored by Hollywood Radio and Television Society. Hollywood Palladium, Hollywood.
Mar. 12	1967 Awards Dinner, American TV Commercials Festival. Americana Hotel, New York City.
April 9–12	Fourth Annual Hollywood Festival of World Television. La Costa Spa and Country Club, Carlsbad, Calif.
April 10	39th Annual Awards of the Academy of Motion Picture Arts and Sciences. Santa Monica Civic Auditorium, Santa Monica.
April 16–21	101st Semiannual Technical Conference of the SMPTE, New York Hilton Hotel, New York City.
May 10–13	Ninth Annual American Film Festival. Biltmore, New York City.
May 15–19	SPSE, Annual Conference on Photographic Science and Engineering, Sherman House, Chicago.

INTERNATIONAL BROADCASTING AWARDS

Over 3000 entries including 1897 TV commercials and 1145 radio commercials have been received for judging in the 1967 International Broadcasting Awards being held March 7 at the Hollywood Palladium. From the 3000, some 200 will be selected for the final competition which is sponsored by the Hollywood Advertising Club. Winners in 19 categories will be honored at the event.

"ARE YOU LOOKING"?

Responses to the listings below should be sent to REWIND, General Film Laboratories, 1546 N. Argyle Avenue, Hollywood, California, 90028, in care of the code number indicated. They will be forwarded, unopened, to the proper organization or individual.

Versatile Film-Maker—College trained, experienced film man looking for challenging opportunity to set up and operate new unit for industry or educational institution. Completely capable of independently planning and setting up facility, then making high-quality films to tight deadlines and low budgets. Code 409.

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AV Specialist, ending a 3-year mission for UNESCO in Africa, desires position anywhere with responsibilities in educational field. Fluent French, English, Portuguese and Dutch. Thorough knowledge of AV techniques, with most experience in TV, 16mm film production and photography. Former AV college teacher. Code 410.

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Producer/Director/Cameraman/Editor—Over 9 years experience in TV commercials, TV series, industrial films, slidefilms and live shows for business theatre. Have complete knowledge in all phases of audio-visual needs. Presently Radio–TV Producer for billion dollar firm. Seeking position with producer or industrial firm where talent in film area can be utilized to fuller extent. B.S. degree, Radio & TV major. 32 years old, married, 2 children. Resume and samples on request. Code 411.

* * * * *

Veteran creative film producer seeking a more challenging position in public relations, public information or industrial motion picture production. Thirteen years of educational film production—all phases from writing to screen with many awards. Very good idea and "take-charge" type man. Prefer west of the Mississippi River. Code 412.

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Writer/Director/Narrator: Ten years 16mm documentary film experience with prior TV background. Wants to make films for people who put film-making first whether they be plain and simple or fine and dandy. Prefer Western sector. $12,000. Stable, married with children. Complete resume on request. Code 413.